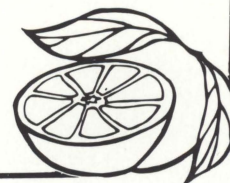




# Texas Agricultural Extension Service

## Texas Citrus Pruning Citrus

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Citrus trees normally require little pruning beyond the removal of root sprouts, water sprouts and dead wood. These operations may be performed as necessary. Some pruning may be required in rehabilitating orchards from limb breakage caused by strong winds. Additional pruning is either maintenance pruning or pruning to rehabilitate orchards after a freeze.

### Maintenance Pruning

Maintenance pruning is used to control tree size to permit normal orchard operations and maintain orchard productivity. Crowded orchards ultimately decline in production as the fruit-bearing wood of the canopy is pushed further from the trunk and scaffold limbs. Moreover, little production occurs where limbs of adjacent trees grow together. Severe crowding coupled with large, tall trees ultimately results in dieback and loss of limbs—and thus fruit production—in the tree skirts. Finally, trees which spread into row middles begin to impede the passage of orchard care and harvest equipment. Consequently, maintenance hedging and topping are necessary in older orchards to maintain both a consistent tree size and optimum production.

It is recommended that maintenance pruning be scheduled into a 3-year or 4-year cycle, i.e., prune odd-numbered middles in year 1, even-numbered middles in year 2 and top in year 3. Depending upon regrowth and other conditions, either skip year 4, use it in conjunction with partial topping in year 3 (i.e., top alternate rows or sides of the row top in year 3, complete topping in year 4) or start over with hedging odd-numbered middles.



**Maintenance pruning.**

Hedging should maintain row middles of 7 to 8 feet at the skirts, with angles of  $10^{\circ}$  to  $15^{\circ}$  from vertical. Topping should result in shoulders at 10 to 12 feet height and angles of  $15^{\circ}$  to  $30^{\circ}$  from horizontal to provide a peak in the center of the tree at 12 to 15 feet height. Topping would require two passes per row.

Begin maintenance pruning before crowding becomes a problem so that only light hedging of small limbs is necessary and little, if any, fruit loss results. Grapefruit and early oranges are best pruned after freeze danger and prior to bloom, assuming the existing fruit crop has been harvested. If harvest is not completed and fruit value is significant, delay hedging until after the spring flush grows out. It is better to remove some of the new crop before final fruit drop than to prune off mature fruit into which the previous season's production inputs were invested. For the same reason, Valencia oranges should be pruned in late March or April following harvest and full growth of the spring flush.

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## Rehabilitative Pruning

Rehabilitative pruning is used to rejuvenate trees and remove dead wood resulting from freeze damage. Hedging and topping are effective in removing the outer canopy killed by a moderate freeze, but hand-operated equipment is necessary to buckhorn trees damaged by a severe freeze. In the latter situation, mechanical hedging and topping can be employed to remove a significant portion of the canopy to facilitate the final buck-horning operation.

The prevailing tendency following a freeze is to begin rehabilitation pruning immediately. However, any freeze severe enough to result in defoliation cannot be immediately evaluated as to severity of wood damage. Guessing at the extent of damage can be costly, as some growers learned after the 1983 freeze. In that freeze, some orchards that were pruned early were almost completely dead by the end of summer, thus incurring unnecessary expenses.

Experience from previous severe freezes has clearly proven the advantages of delaying pruning decisions until a complete assessment of the extent of damage can be made. Early summer is about as



**Rehabilitative pruning.**

early as damage evaluations can be made accurately because damaged citrus trees sprout out new growth during the spring. However, much of that new growth will die before summer because of underlying damage to the bark. Dieback can and does occur for 2 years or more following a major freeze. Consequently, rehabilitative pruning should be delayed until after the spring growth flush matures in early summer.

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